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Third Consultation on the
Agricultural Machinery Industry

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# PROGRESS REPORT ON THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE CONSULTATIONS ON THE AGRICULTURAL MACHINERY INDUSTRY*

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the UNIDO Secretariat

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1. So far three Consultations - of which one was regional - have been convened on the Agricultural Machinery Industry. The First Consultation was held in Stresa, Italy, in October 1979 and the Second Consultation took place in Vienna, Austria, in October 1983. The Regional Consultation, which dealt with the problems of Africa, was held in Addis-Ababa, Ethiopia, in April 1982. The reports of those meetings were circulated as documents ID/239, ID/307, ID/285 respectively.

2. The consultation process on the Agricultural Machinery Industry began by the examination of the basic considerations of the agricultural machinery development in developing countries, and by identifying the main problems of this sector at the country and global levels. It has now progressed to the examination of more complicated issues such as those related to the concept of the multi-purpose approach to manufacturing agricultural machinery and implements suitable to local conditions, long-term arrangements and the mobilization of small-and medium-scale enterprises in this sector.

3. At the First Consultation, issues related to strategy for the promotion of the agricultural machinery in developing countries and the required basic facilities for its production were discussed and consequent recommendations were adopted. In that context, UNIDO was requested to strengthen its technical assistance programme taking due account of the conditions prevailing in developing countries in order to devise a concrete/appropriate programme of action for their industrialization. In its programme of action UNIDO was also requested to organize a regional consultation meeting in Africa.

4. In pursuance of the recommendations of the First Consultation, the following major meetings were convened:

(1) Meeting on Exchange of Experience and Co-operation among Developing Countries in the Development of the Agricultural Machinery Industry, Beijing, People's Republic of China, 20-27 October 1980 (Report: ID/WG 330/31/Rev.1)

In this meeting, several proposals for South-South co-operation were submitted and it was recommended that an international centre for the development of the agricultural machinery industry be established in Beijing, People's Republic of China.

(2) First Regional Consultation on the Agricultural Machinery Industry in Africa, Addis Ababa, Ethiopia, 3-9 April 1982 (Report: ID/WG. 365/8)

The First Regional Consultation was prepared and held in close collaboration with the Food and Agriculture Organization of the United Nations (FAO), the Organization of African Unity (OAU) and the Economic Commission for Africa (ECA). For this meeting, sixteen diagnostic studies using a common methodology were carried out at the national level in African countries in order to identify problems as well as the existing manufacturing capacities in the field of agricultural equipment (Document:UNIDO/IS. 377).

The Regional Consultation confirmed that vast opportunities existed for co-operation between Africa and the rest of the world as well as among African countries. A proposal for An African Development Plan for Agricultural Equipment and Machinery (1982-1990) was also adopted. In line with these recommendations and at the request of the Government of the United Republic of Cameroon, a project to define and prepare a 10-year national plan for agricultural mechanization has been initiated in collaboration with FAO.

(3) Workshop on Design and Development of Agricultural Equipment in Africa, Cairo, Egypt, 17-28 October 1982 (Report: UNIDO/PC.85)

As a follow-up to the Regional Consultation, a workshop was held in Cairo, Egypt, from 17-28 October 1982, which was attended by representatives from 17 countries, who described their experiences in the adaptation, design and development of simple agricultural equipment. The exchange of information among interested countries on plans for the manufacture of tools and machinery was recognized as being the first effective step towards regional co-operation.

(4) Working group on training in Agro-machinery Industries and Multi-purpose plants, Rosario, Argentina, 9-14 December 1985 (Report under preparation)

The preparation for and the implementation of the Working Group meeting was based on a field survey conducted in five developing countries, namely, Argentina, Bangladesh, Sudan, Syria and Tanzania, to identify training needs, existing institutions in those countries which might be utilized to provide training, as well as training possibilities in the advanced developing/ developed countries, and in the industry itself (Report:ID/WG.451/1).

The Working Group confirmed that there was a need for training of personnel from developing countries in the manufacture, repair and maintenance and use of agriculture machinery. The Working Group placed a significant emphasis on the development of institutional training capabilities - either as part of a larger institutional base (e.g. R + D Centres, Repair and Maintenance Centres, Extension services, etc.).

5. Within the framework of its technical co-operation programme, UNIDO directed its efforts at the further improvement of national capabilities in product design, manufacture, repair and maintenance. Assistance in the production of irrigation machinery drilling equipment and hydropower equipment of all types continued to support the exploitation of national resources in the developing countries. The development of process machinery and production of spare parts for industries based on agriculture such as rice, sugar and palm oil, represented a new significant trend in the years 1984/1985.

6. In line with the recommendations of the Regional Consultation on Africa and the Second Consultation, UNIDO has given priority, within the framework of the Industrial Development Decade for Africa, to developing appropriate engineering activities in Africa. New activities initiated in 1984 included a preparatory mission to the nine member countries of the Southern African Development Co-ordination Conference (SADCC), to develop a programme network for the agricultural machinery industry. Technical discussions with the African Regional Center for Engineering Design and Manufacturing (ARCEDEM) were conducted on strengthening national engineering institutional capabilities in selected member countries. Progress was made in upgrading existing production of intermediate level equipment. A UNDP/United Nations Capital Development Fund (UNCDF) financed programme in Togo on serial production of agricultural equipment was further extended and projects related to the production of agricultural tools and machinery continued in Burkina Faso, Lesotho and Somalia.

7. Emphasis was given to maintenance and repair, production of spare parts and training in the area of agricultural implements, pumps and irrigation equipment. Further assistance was provided to a workshop in Cameroon to enhance its capabilities in maintenance and repair as well as in the production of spare parts for local small- and medium-scale industries. As part of the activities of a large-scale project in Madagascar, a national

seminar on industrial maintenance was held in March 1984. Progress was achieved in assisting the African National Congress (ANC) in the establishment of a mechanical workshop at Mazimbu (United Republic of Tanzania).

8. In Senegal, training covered the operation and maintenance of motor-driven irrigation pumps. A pump repair unit is being installed at a mechanical workshop and foundry in Somalia with a view to extending the lifespan of pumps and making optimum use of existing facilities and manpower. A project in Mali jointly financed by UNDP, UNIDF and UNCDF, made significant progress in the manufacture of hand-operated water pumps and in upgrading capacities for maintenance and repair as well as the manufacture of spare parts for industrial and transport equipment. The current annual production rate is around 1,200 pumps satisfying the present internal market requirements and permitting some export to neighbouring countries. The Mali project represents a good example of multifunded technical assistance.

9. UNIDO continued to co-operate with other United Nations bodies and organizations to develop the agricultural machinery subsector in developing countries. At the regional level, further support was given to the Regional Network for Agricultural Machinery in Asia and the Pacific and co-operation strengthened with ARCEDEM, SADCC and the Common African and Mauritian Organization (OCAM). UNIDO provided technical inputs to the Interagency Working Group on Desertification and submitted proposals on the development of manufacturing capabilities for pumps and agricultural tools in Africa. Technical inputs were also provided to the Working Group of the Administrative Committee on Co-ordination Task Force on Science and Technology for Development related to joint activities within the African Regional Network for Agricultural Tools and Equipment.

10. At the Second Consultation, the issues related to the multi-product approach and long-term arrangements were discussed and recommendations accordingly adopted. With regard to the multi-product approach, the recommendation was made to establish an international group of experts that would be responsible for working out the details of the applicability of the multi-product to manufacturing and demonstrating practical ways of implementing this approach. With respect to long-term arrangements, the recommendations put emphasis on the need to prepare guidelines for the import,

assembly and manufacture of agricultural machinery and training and to convene an international group of experts to agree upon these guidelines. Concerning the role devoted to the small and medium-scale enterprises in the field of Agricultural Machinery Industry, it was recommended that a group of experts should elaborate a framework for international co-operation to facilitate the establishment of contacts and to improve the effectiveness of such co-operation.

11. In order to implement the recommendations related to the multi-product approach, UNIDO organized in association with the Government of the People's Republic of China, the first meeting of international group of experts at Guangzhou, from 13-18 November 1984 1/. The major outcome of the meeting was the agreement to prepare guidelines for the establishment of multi-purpose agricultural machinery plants in developing countries and the need to complement the technological requirements with those for training, infrastructure, raw materials and financial means. Accordingly, a study on African and Asian countries was carried out based on a survey of plants and/or institutions in Guinea, Indonesia, Kenya, Thailand and Togo, and in Cyprus to compile information for the preparation of the corresponding guidelines. The final version of the latter will be presented as a reference document to the Third Consultation.

12. On the subject of contractual arrangements, an analytical report which compares the relevant provisions in codes of national and international institutions (ORGALIME, WIPO, etc.), with those of UNIDO and other codes was finalized 2/.

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1/ For report, see ID/WG. 449/84

2/ R. Fitz Gerald, ID/WG. 443/2, Comparison of sample clauses for contracts for the initial management of a factory for the assembly or manufacture of agricultural machinery and the rendering of technical assistance ancillary thereto: ID/WG.443/3, Comparison of sample clauses for contracts for the supply of spare parts for agricultural machinery; ID/WG.443/4, Comparison of sample clauses for contracts for the supply and installation of production equipment for the assembly and manufacture of agricultural machinery: ID/WG.443/5, Comparison of sample clauses for contracts for the transfer of know-how, grant of patent/trademark licenses, assignment of technical information and the rendering of technical services ancillary thereto for the manufacture of agricultural machinery: ID/WG.443/6, Comparison of sample clauses for contracts between clients and industrial architects for the design and supervision of the construction of works for the assembly or manufacture of agricultural machinery; ID/WG.443/7, Comparison of sample clauses for contracts for the supply of agricultural machinery.

On the basis of the analytical report the preparation of the corresponding guidelines was completed 3/.

An Expert Group Meeting on Guidelines for the Import, Assembly and Manufacture of Agricultural Machinery and Training was convened in Vienna, 9-12 September 1985, 4/ at which the above-mentioned documents were discussed. That Meeting agreed that it would be better to elaborate the Guidelines and include model or illustrative clauses rather than establishing model contracts. The diffusion of that information in developing countries was started in 1985 and will continue in 1986. The final version of the Guidelines will be presented as a reference document to the Third Consultation.

13. Concerning the elaboration of a framework for international co-operation with particular emphasis on small-and medium-scale enterprises, the meeting of the international group of experts could not be convened due to lack of financial resources. However, studies were undertaken in developing geographic regions in order to identify the status of local manufacturing plants and institutions involved in the agricultural machinery industry development and co-operation. These studies are:

(a) Prospects of international co-operation among small and medium-scale interprises in agricultural machinery manufacturing in RNAM countries. Z.ur Rahman (RNAM) December 1985.

(b) International co-operation for the development of Agricultural Machinery Industry in Africa. Mr. Beavogui (ARCEDEM), July 1985.

(c) The Multi-purpose approach to agricultural machinery manufacturing in Latin America, UNIDO/IS.607.

14. Regarding the preparation of the Third Consultation, which will be of interregional nature, special emphasis has been given to the examination of the industrial aspects of the food problem in Africa. In this context alternative development strategies for the local production of agricultural machinery with special emphasis on irrigation hardware in developing countries

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3/ R. Fitz Gerald, ID/WG.443/1, Guidelines to International Contracts for the Acquisition, Assembly and Manufacture of Agricultural Machinery and Spare Parts Therefor.

4/ For Report, see ID/WG.443/8.

and particularly in Africa were analysed. For this purpose, a study on strategies for the impulsion of the agricultural machinery industry and the intensification of agricultural mechanization in developing countries was undertaken in selected countries of the developing geographic regions 5/. A study was also undertaken on the problems of water management in agriculture and the need for the development of manufacturing of pumping systems for irrigation, drainage and rural uses of water analysed in the perspective of varying degrees of technological dependency in developing countries 6/.

15. In accordance with the nature of the Third Consultation as mentioned above, emphasis has been given to the study of the perspectives for interregional co-operation in the field of agricultural machinery development. This study, which is based on a survey of manufacturers, particularly in the small-and medium-scale sector, and other related institutions in Africa, Asia, Europe and Latin America, would give transparency to the requirements of the different actors for a successful framework for co-operation in the areas of transfer of technology, trade, training, finance etc.

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5/ See report prepared by D. Diaz Martin, UNIDO Consultant
6/ Technological dependency and choice of pumping technologies for irrigation systems, Munir Allahwerdi, UNIDO Consultant, March 1986.